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Brian H. Toby  
Publication List

1. Hutson, N. D., Reisner, B. A., Yang, R. T, and Toby, B. H., "Silver Ion-Exchanged Zeolites Y, X, and Low-Silica X: Observations of Thermally Induced Cation/Cluster Migration and the Resulting Effects on the Equilibrium Adsorption of Nitrogen", *Chemistry of Materials* **12**, 3020 (2000).
2. Olson, D. H., Khosrovani, N., Peters, A. W., and Toby, B. H., "Crystal structure of dehydrated CsZSM-5 (5.8Al): Evidence for nonrandom aluminum distribution", *Journal of Physical Chemistry B* **104**, 4844 (2000).
3. Park, S.-H., Parise, J. B., Gies, H., Liu, H., Grey, C. P., and Toby, B. H., "A New Porous Lithosilicate with a High Ionic Conductivity and Ion-exchange Capacity", *Journal of the American Chemical Society*, in press (2000).
4. Reisner, B. A., Lee, Y., Jones, G., Hanson, J. C., Freitag, A., Parise, J. B., Toby, B. H., Corbin, D. R., Larese, J. Z., and Kahlenberg, V., "Understanding negative thermal expansion and "trap door" cation relocations in zeolite RHO", *Chemical Communications*, in press (2000).
5. Toby, Brian H., Khosrovani, Nazy, Dartt, Christopher B., Davis, Mark E., and Parise, John B., "Structure-directing Agents and Stacking Faults in the CON System: A Combined Crystallographic and Computer Simulation Study.", *Microporous and Mesoporous Materials* **39**, 77 (2000).
6. Johnson, G. M., Reisner, B. A., Tripathi, A., Corbin, D. R., Toby, B. H., and Parise, J. B., "Flexibility and cation distribution upon lithium exchange of aluminosilicate and aluminogermanate materials with the RHO topology", *Chemistry of Materials* **11**, 2780 (1999).
7. Kaduk, J. A., Wong-Ng, W., Greenwood, W., Dillingham, J., and Toby, B. H., "Crystal structures and reference powder patterns of BaR<sub>2</sub>ZnO<sub>5</sub> (R = La, Nd, Sm, Eu, Gd, Dy, Ho, Y, Er, and Tm)", *Journal of Research of the National Institute of Standards and Technology* **104**, 147 (1999).
8. Li, Z. G., Harlow, R. L., Foris, C. M., Li, H., Ma, P., Vickery, R. D., Maurin, M. B., and Toby, B. H., "Polymorph determination for the GP IIb/IIIa antagonist, roxifiban, using a combination of electron diffraction and synchrotron X-ray powder diffraction techniques", *Journal of Pharmaceutical Sciences* **88**, 297 (1999).
9. Pardo, H., Ortiz, W. A., Araujo-Moreira, F. M., Suescun, L., Toby, B. H., Quagliata, E., Negreira, C. A., Prassides, K., and Mombru, A. W., "A new structure in the REBaCuFeO<sub>5+δ</sub> series: LaBaCuFeO<sub>5+δ</sub>. Structure and magnetic properties in the La<sub>1-x</sub>Pr<sub>x</sub>BaCuFeO<sub>5+δ</sub> system", *Physica C* **313**, 105 (1999).
10. Toby, B. H., Purnell, S., Hu, R., Peters, A. W., and Olson, D. H., *An Attempt to Locate Protons in the ZSM-5 Structure by Combined Synchrotron and Neutron Diffraction*, in Proceedings of the 12<sup>th</sup> International Zeolite Conference, ed. M. M. J. Tracy, B. K. Marcus, M. E. Bisher, and J. B. Higgins (Materials Research Society, Warrendale, PA, 1999) pp.2413-2416.

11. Vanderah, T. A., Wong-Ng, W., Toby, B. H., Browning, V. M., Shull, R. D., Geyer, R. G., and Roth, R. S., "Characterization of ternary compounds in the BaO : Fe<sub>2</sub>O<sub>3</sub> : TiO<sub>2</sub> system: Ba<sub>6</sub>Fe<sub>45</sub>Ti<sub>17</sub>O<sub>106</sub> and BaFe<sub>11</sub>Ti<sub>3</sub>O<sub>23</sub>", *Journal of Solid State Chemistry* **143**, 182 (1999).
12. Kaduk, J. A., Toby, B. H., Wong-Ng, W., and Greenwood, W., "Crystal structure and reference X-ray pattern of Ba<sub>4</sub>Ti<sub>10</sub>Al<sub>2</sub>O<sub>27</sub>", *Powder Diffraction* **13**, 178 (1998).
13. Toby, B. H., "GUI-based Tools for Powder Diffraction Using Tcl/Tk", *Commission of Powder Diffraction Newsletter (International Union of Crystallography)* **20**, 37-37 (1998).
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15. Zhao, J., Glazounov, A. E., Zhang, Q. M., and Toby, B. H., "Neutron Diffraction Study of Electrostrictive Coefficients of Prototype Cubic Phase of Relaxor Ferroelectric PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>", *Applied Physics Letters* **72**, 1048 (1998).
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23. Toby, B. H. and Egami, T., *Accuracy of Pair Distribution Function Analysis for Crystalline and Non-Crystalline Materials*, in *Accuracy in Powder Diffraction II*, ed. E. Prince and J. K. Stalick (U.S. Department of Commerce, Gaithersburg, MD., 1992) pp.105-109.
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29. Toby, B. H., Egami, T., Jorgensen, J. D., and Subramanian, M. A., "Observation of A Local Structural Change at  $T_c$  for  $\text{Tl}_2\text{Ba}_2\text{CaCu}_2\text{O}_8$  by Pulsed Neutron Diffraction", *Physical Review Letters* **64**, 2414 (1990).
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Work in Progress

1. Moyer, R. O. Jr. and Toby, Brian H., "Ca<sub>2</sub>IrD<sub>5</sub> - An Order-Disorder Transition and Infrared Characterization", MS in preparation , (2000).
2. Toby, B. H., "EXPGUI, a Graphical User Interface for GSAS", to be submitted to the Journal of Applied Crystallography, submitted for NIST approval, Oct 2000.
3. Toby, B. H., *The Classification of Powder Diffraction Data*, in International Tables for Crystallography Volume G: Crystallographic Information, ed. S. R Hall and B. McMahon Chap. 2.3, submitted to editors January 2000.
4. Toby, B. H., *Diffraction Analysis and Crystallographic Structure Determination*, in Handbook of Ceramic Engineering, ed. M. N Rahaman, submitted to editor June 1998.